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APPLICATION NUMBER	FILING DATE	FIRST NAMED APPLICANT	ATTY. DOCKET NO.
09/079,640	05/15/98	DANIELL	H 922.6588P

EXAMINER

HM12/0412

FOX, D

ART UNIT	PAPER NUMBER
1638	10

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DATE MAILED: 04/12/00

This is a communication from the examiner in charge of your application.
COMMISSIONER OF PATENTS AND TRADEMARKS

OFFICE ACTION SUMMARY

☑ Responsive to communication(s) filed on 1/27/00

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 D.C. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire — 3 — month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

☑ Claim(s) 1-188 is/are pending in the application.
Of the above, claim(s) 1, 85, 97-106, 108-117, 120-121, 123-167, 170 + 177-188 is/are withdrawn from consideration.
☐ Claim(s) _____ is/are allowed.
☑ Claim(s) 2-84, 86-96, 107, 118-119, 122, 168-169, 171-176 is/are rejected.
☐ Claim(s) _____ is/are objected to.
☐ Claim(s) _____ are subject to restriction or election requirement.

Application Papers

☑ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.
☐ The drawing(s) filed on _____ is/are objected to by the Examiner.
☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.
☐ The specification is objected to by the Examiner.
☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been

☐ received.
☐ received in Application No. (Series Code/Serial Number) _____.
☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____.

☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☑ Notice of Reference Cited, PTO-892
☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____
☐ Interview Summary, PTO-413
☑ Notice of Draftperson's Patent Drawing Review, PTO-948
☐ Notice of Informal Patent Application, PTO-152

--SEE OFFICE ACTION ON THE FOLLOWING PAGES--

★ U.S. GPO: 1996-404-496/40517

The Group and/or Art Unit location of your application in the PTO has changed. To aid in correlating any papers for this application, all further correspondence regarding this application should be directed to Group Art Unit 1638.

Applicant's election with traverse of Group II in Paper No. 9 is acknowledged. The traversal is on the ground(s) that the inventions set forth by the Examiner are not independent, the common subject matter of each of the groups as united by a universal chloroplast expression vector, the similarity between peptide-encoding and non-peptide encoding molecules, the lack of a burdensome search as evidenced by the common classification assigned to some of the groups, and the failure of the inventions to be distinct from each other. Applicants also urge that the Examiner's characterizations of claims 185-186 are incorrect, since these claims depend upon claims 180 and 181, respectively. The Examiner notes that Applicants have contacted Biotechnology Practice Specialist Richard Schwartz regarding the instant restriction requirement. As the Examiner has received no instructions to the contrary from Mr. Schwartz, the Examiner has subjected the instant application to the same standards that he applies to any other patent application, particularly one with as many as the instant 188 claims.

Applicants' arguments are not found persuasive because inventions may be properly restrictable if they are not independent but are in fact distinct, as supported by the MPEP and as correctly noted by Applicants on page 4 of the response of 27 January 2000. Thus, Applicants' arguments that the inventions do not share the same degree of independence as a shoe (or necktie) and a locomotive bearing (page 2 of the response of 27 January 2000) are deemed moot. The

inventions are clearly distinct, as set forth below. Each invention involves divergent genes such as genes encoding non-peptides such as antisense RNA or ribozymes (Group I), peptides (Group II), a multitude of physiologically divergent proteins with divergent biological activity such as insecticides, animal hormones, herbicide resistance agents, or synthetic biopolymers, wherein a search for each gene product would also involve a search for the biological effects of that gene product as well as a search for the source organism from which the gene was derived. Applicants' arguments to the contrary, the difference between the mechanism of antisense RNA-mediated or ribozyme-mediated gene inhibition and protein production is not trivial, as evidenced by their divergent classification and divergent art units specifically assigned to examine each one (Art Unit 1635 versus Art Unit 1652, respectively). In addition, different art units are assigned to examine animal hormones versus synthetic biopolymers, and genes encoding them, etc. Clearly, divergent searches are required for inventions which have been assigned to different personnel in the Patent Office.

In addition, different art units are assigned to examine proteins *per se* (Art Units 1652 and 1653) versus genes encoding them (Art Units 1638, etc.) It is noted that isolated proteins (Groups VI-VII) are routinely restricted from methods of making them via host cell transformation and gene expression (e.g. Groups II-V), per MPEP 806.05(f). In addition, different art units are assigned to examine methods of gene identification via probing (an alternative use for the DNA of Group XIII) versus methods for incorporating the gene into an expression vector (Art Unit 1655 versus Art Unit 1638, for example), wherein products and

processes of use are also routinely restrictable as mandated by MPEP 806.05(h). Applicants are respectfully directed to those sections of the MPEP. The Examiner regrets that he did not include these portions of the MPEP as additional bases for the restriction; however, it is maintained that the basis for the restriction as set forth previously is more than adequate.

With regard to the common classes assigned to some of the inventions, the Examiner notes that different subclasses were employed, so that Applicants' allegations that the inventions were commonly classified are not understood. Furthermore, classification is but one type of evidence which may be relied upon to support the case for restriction. The other types of evidence, divergent subject matter and divergent fields of search, have been more than adequately addressed in the instant office action and in the prior restriction.

With regard to claims 185 and 186, the Examiner acknowledges Applicants' observations that these claims depend upon 180 and 181. However, claims 180 and 181 are drawn to "expression cassette[s]", while claims 185 and 186 are drawn to "stably transformed chloroplast[s]". Thus, the Examiner assumed that the claim dependencies were incorrect. The Examiner apologizes for his failure to alert Applicants to this assumption. Applicants are requested to clarify the above situation. Upon clarification, the Examiner will be happy to reassign any claim that has been incorrectly assigned.

It is noted that Applicants did not provide an Information Disclosure Statement with the application as originally filed; an action which appears contrary to their assertions that a

burdensome search would not be required to examine all of the inventions as set forth in the 188 claims.

The requirement is still deemed proper and is therefore made FINAL.

The instantly claimed subject matter of the elected invention, namely the use of the intergenic spacer sequences of the chloroplast genome, such as the intergenic spacer 2 region between the tRNA-isoleucine and tRNA-alanine genes, in a universal chloroplast expression vector, was not disclosed in parent application Serial No. 08/591,407 or any earlier parent application. Accordingly, this subject matter is being assigned an effective filing date of the first provisional application, namely August 7, 1997.

The oath or declaration is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.

The oath or declaration is defective because:

> It does not state that the person making the oath or declaration in a continuation-in-part application filed under the conditions specified in 35 U.S.C. 120 which discloses and claims subject matter in addition to that disclosed in the prior copending application, acknowledges the duty to disclose to the Office all information known to the person to be material to patentability as defined in 37 CFR 1.56 which occurred between the filing date of the prior application and the national or PCT international filing date of the continuation-in-part application.

Furthermore, the oath or declaration is defective because it does not list prior application Serial Nos. 08/215, 020 or 07/249,616.

Photographs and color drawings are acceptable only for examination purposes unless a petition filed under 37 CFR 1.84(a)(2) or (b)(1) is granted permitting their use as formal drawings. In the event applicant wishes to use the drawings currently on file as formal drawings, a petition must be filed for acceptance of the photographs or color drawings as formal drawings. Any such petition must be accompanied by the appropriate fee as set forth in 37 CFR 1.17(i), three sets of drawings or photographs, as appropriate, and, if filed under the provisions of 37 CFR 1.84(a)(2), an amendment to the first paragraph of the brief description of the drawings section of the specification which states:

> The file of this patent contains at least one drawing executed in color. Copies of this patent with color drawing(s) will be provided by the Patent and Trademark Office upon request and payment of the necessary fee.

Color photographs will be accepted if the conditions for accepting color drawings have been satisfied.

The petition under 37 CFR 1.84(a)(2) and 1.84(b)(1) filed 15 May 1998 to accept the color and black-and-white photographs, accompanied by three sets of drawings and the appropriate fee, has been GRANTED. Applicants are requested to amend the specification as set forth above.

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 2-84, 86-96, 107, 118-119, 122, 168-169 and 171-176 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 19-23, 25-29, 31 and 34 of U.S. Patent No. 5,932,479. Although the conflicting claims are not identical, they are not patentably distinct from each other because it would have been obvious to one of ordinary skill in the art to obtain the chloroplast expression vector comprising a promoter/structural gene/terminator flanked by homologous chloroplast regions for integration, and the resultant plants containing the transformed chloroplasts, as claimed in the instant application; by utilizing the chloroplasts transformed with an expression cassette comprising the same components as recited in the above expression vector, and the expression cassette and vector containing it, as claimed in the patent.

Claims 2-84, 86-96, 107, 118-119, 122, 168-169 and 171-176 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 119-120, 122, 124, 132, 140-142, 153-157, 166-167 and 188 of copending Application No. 08/972,901. Although the conflicting claims are not identical, they are not patentably distinct from each other because it would have been obvious to one of ordinary skill in the art to obtain the chloroplast expression vector comprising a promoter/structural

gene/terminator flanked by homologous chloroplast regions for integration, and the resultant plants containing the transformed chloroplasts, as claimed in the instant application; by utilizing the plants comprising chloroplasts transformed with an expression cassette comprising the same components as recited in the above expression vector, and the expression cassette and vector containing it, as claimed in the copending application.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

Claims 31-84, 118-119 and 122 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-2 and 5-6 of copending Application No. 09/356,192. Although the conflicting claims are not identical, they are not patentably distinct from each other because it would have been obvious to one of ordinary skill in the art to utilize the transformed chloroplast and plant cell and plant comprising it as claimed in the copending application to obtain the plants containing transformed chloroplasts as claimed in the instant application.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 16-30, 45, and 119 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 16-30 and dependent claim 45 are indefinite in the recitation of "other than that of the target plant" which fails to further limit claims drawn to a vector *per se*. Even though the intended use of the vector may be to transform a variety of plant species, the vector itself will still contain DNA sequences from a particular plant species, which may be considered to be from the same the target plant or from a different target plant, depending upon the actual use of the vector at any given time. Furthemore, claims 28-30 are indefinite in their recitation of "from a plant other than the target plant from the same species as the target plant species" which is unduly narrative and confusing.

Claim 119 is indefinite in its recitation of "harvested" as it is unclear what Applicant intends, and as it is unclear how this further limits claim 118 which is also drawn to a plant. Cancellation of claim 119 would obviate this rejection.

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 2-84, 86-96, 107, 118-119, 122, 168-169 and 171-176 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for claims limited to an expression vector comprising the tobacco chloroplast intergenic spacer 2 region between the

tRNA-isoleucine and tRNA-alanine genes for homologous recombination with the chloroplast genome of higher plants, does not reasonably provide enablement for claims broadly drawn to an expression vector comprising any intergenic spacer from any region of the chloroplast genome from any plant species, or for transformed lower plants such as algae, or for the obtention of homoplasmy within a single or multiple generation following chloroplast transformation therewith. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention commensurate in scope with these claims.

The specification only provides guidance for an expression vector comprising the tobacco chloroplast intergenic spacer 2 region between the tRNA-isoleucine and tRNA-alanine genes for homologous recombination with the chloroplast genome of higher plants. No guidance is provided for the identification or isolation of any other chloroplast intergenic spacer region from tobacco, any other chloroplast intergenic spacer region from any other plant species, or the transformation of chloroplasts of lower plants such as algae by using said expression vector. Furthermore, no guidance is presented for the actual obtention of homoplasmy, either in a single generation following transformation or multiple generations. Applicant's theory that the inclusion of a chloroplast origin of replication will result in single generation homoplasmy (page 12 of the specification, lines 23-27) is noted; however, no data has been provided to support this assertion. In contrast, the claims are broadly drawn to any expression vector comprising any intergenic region from any region of the tobacco chloroplast genome or any other plant species' genome, its

use to transform any plant species including algae, and the obtention of homoplasmy within one or multiple generations in any plant species.

Transformation of the chloroplast genome is unpredictable, as evidenced by the failure of other workers to repeat previously reported success, and the instability of the introduced DNA fragments (see, e.g., Chasan, page 1, middle paragraph of each of columns 2 and 3). Furthermore, monocots have been recalcitrant to chloroplast transformation (see, e.g., page 4 of the specification, line 29 through page 5 of the specification, line 5).

In addition, the intergenic regions of the chloroplast genome are generally not conserved between different plant species (see, e.g., page 7 of the specification, lines 20-34). Even with the intergenic 2 spacer region between the tRNA-isoleucine and tRNA-alanine genes, substantial sequence divergence occurs throughout the plant kingdom. In broad bean, spinach, and soybean, this region was highly divergent and lacked similarity with the conserved tobacco and maize regions (see, e.g., Bonnard et al, page 417, column 2, bottom paragraph; Massenet et al, page 53, Abstract and paragraph bridging the columns; de Lanversin et al, page 443, column 2, first two full paragraphs). In addition, this region in algae varies greatly when compared with higher plants, and significant variation occurs even within the class of algae (see, e.g., Maid et al, page 537, Abstract).

Given the claim breadth, unpredictability and lack of guidance as discussed above, undue experimentation would have been required by one skilled in the art to identify and isolated a multitude of non-exemplified chloroplast intergenic spacer regions from a multitude of

exemplified or non-exemplified plant species, to evaluate the ability of each of these exemplified or non-exemplified spacer regions to effect homologous recombination with a multitude of non-exemplified plant species including lower plants, or to obtain homoplasmy with the exemplified or non-exemplified chloroplast expression vector following a single or multiple generations.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless --
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 2-3, 86-87, 90, 92, 94, 171, 173 and 176 are rejected under 35 U.S.C. 102(b) as being anticipated by Zoubenko et al.

Zoubenko et al teach an expression vector comprising a heterologous uidA gene or a heterologous aadA gene encoding a polypeptide which confers a selectable resistance to an otherwise lethal antibiotic, said gene under the control of a 5' Prrn promoter and 3' Trps16 polyadenlyation signal, wherein the vector also comprises a region of homology comprising the tobacco trnV-rps2/7 intergenic spacer region, wherein these genes are conserved throughout the plant kingdom, and wherein the region of homology resulted in stable integration of the heterologous construct into the chloroplast genome of transformed tobacco plants (see, e.g., page 3819, Abstract and first full paragraph of column 2; page 3829, column 2, top and bottom paragraphs; page 3821, Figures 1 and 2; paragraph bridging pages 3823 and 3824).

Claims 2-9, 16-21, 31-36, 46-48, 55-57, 61-63, 86-87, 90, 92, 94-96, 107, 118, 122, 168-169, 171, 173-175 are rejected under 35 U.S.C. 102(b) as being anticipated by Staub et al (1993) in light of Staub et al (1992).

Staub et al (1993) teach the transformation of tobacco cells with an expression vector comprising a heterologous uidA gene encoding the beta-glucuronidase polypeptide which was subsequently isolated, said gene under the control of a 5' psbA promoter and a 3' psbA polyadenylation signal, wherein the vector also comprises the region of homology found on vector pJS75, wherein whole plants were obtained which demonstrated stable incorporation of the heterologous gene into the chloroplast genome due to homologous recombination with the region of homology (see, e.g., page 601, Abstract and bottom paragraph of column 2; page 602, Figures 1 and 2; page 603, Figure 3B).

Staub et al (1992) show that the region of homology from vector pJS75 in fact contains the tobacco tRNA(Ile) and tRNA(Ala) genes and 16SrDNA gene containing an antibiotic resistance gene, and inherently contains the spacer 2 intergenic region therebetween, and state that the vector has been used for stable introduction of the heterologous uidA gene (see, e.g., page 39, Abstract and bottom paragraph of column 2; page 40, Figure 1 and column 1; page 43, column 2, bottom paragraph).

Claims 2-3, 86-87, 89-94, and 176 are rejected under 35 U.S.C. 102(b) as being anticipated by EP 251,654 (BIOTECHNICA).

BIOTECHNICA teach the transformation of corn or tobacco with an expression vector comprising a heterologous antibiotic resistance gene under the control of a promoter, flanked by an intergenic spacer region from maize or tobacco for homologous recombination with the chloroplast genome of the target plant (see, e.g., Figures 1a, 1b and 2; columns 3-5, 9, 12, 13 and 15-16; claims 1-18). The expression vector would inherently comprise a sequence 3' from the structural gene which could be characterized as some type of unspecified "control region".

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 118 and 122 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Zoubenko et al.

Zoubenko et al teach stably transformed tobacco plants comprising transformed chloroplasts as discussed above. The plants taught by the prior art differ from the claimed plants in the method of making them, namely the use of an expression vector comprising a flanking sequence comprising the intergenic spacer 2 region comprising two tRNA genes. However, the use of said expression vector would not confer a unique property to the resultant transformed chloroplasts or plants containing the chloroplasts, since the homologous recombination would not result in the introduction of any new sequences other than the heterologous DNA of interest. Thus, the claimed invention was clearly prima facie obvious, if not anticipated by, Zoubenko et al.

See *In re Thorpe*, 227 USPQ 964, 966 (Fed. Cir. 1985), which teaches that a product-by-process claim may be properly rejectable over prior art teaching the same product produced by a different process, if the process of making the product fails to distinguish the two products.

Claims 118 and 122 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over BIOTECHNICA.

BIOTECHNICA teaches stably transformed tobacco plants comprising transformed chloroplasts as discussed above. The plants taught by the prior art differ from the claimed plants in the method of making them, namely the use of an expression vector comprising a flanking sequence comprising the intergenic spacer 2 region comprising two tRNA genes. However, the use of said expression vector would not confer a unique property to the resultant transformed chloroplasts or plants containing the chloroplasts, since the homologous recombination would not result in the introduction of any new sequences other than the heterologous DNA of interest. Thus, the claimed invention was clearly prima facie obvious, if not anticipated by, BIOTECHNICA. See *In re Thorpe*, 227 USPQ 964, 966 (Fed. Cir. 1985), which teaches that a product-by-process claim may be properly rejectable over prior art teaching the same product produced by a different process, if the process of making the product fails to distinguish the two products.

Claims 2-84, 86-96, 107, 118-119, 122, 168-169 and 171-176 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zoubenko et al taken with Takaiwa et al, further in view of each of Perl et al and Gordon-Kamm et al, further in view of Maliga et al.

Zoubenko et al teach the advantages of chloroplast transformation with a vector encoding a peptide of interest and/or selectable marker gene, and comprising an intergenic region for homologous recombination as discussed above.

Zoubenko et al do not teach the intergenic spacer 2 region between the tRNA(Ile) and tRNA(Ala) genes, or the transformation of plants other than tobacco.

Takaiwa et al teach the sequence of the tobacco chloroplast intergenic spacer 2 region between the tRNA(Ile) and tRNA(Ala) genes, and its conservation between tobacco and maize (see, e.g., pages 2665-2671).

Perl et al teach potato cell transformation with a gene encoding an enzyme involved in amino acid biosynthesis in the chloroplast, and whole plant regeneration therefrom (see, e.g., page 815, Abstract; pages 816-819).

Gordon-Kamm et al teach corn cell transformation with a peptide-encoding gene and whole plant regeneration therefrom, and suggest the use of the technique to incorporate a variety of agronomically useful traits into corn (see, e.g., page 603, Abstract; pages 604-605; page 614, paragraph bridging the columns).

Maliga et al teach the advantages of chloroplast transformation with regard to lack of pollen transmission and high copy number of the introduced gene, and suggest its application to any crop plant species which is amenable to tissue culture and transformation (see, e.g., page 207, column 2, bottom paragraph; page 208, column 1).

It would have been obvious to one of ordinary skill in the art to utilize the method of chloroplast transformation with an expression vector comprising an intergenic region as taught by Zoubenko et al; and to modify that method by incorporating the highly conserved tobacco intergenic spacer 2 region taught by Takaiwa et al; and to apply this method and vector to a variety of crop plants such as potato, using the transformation and tissue culture methods taught by Perl et al, or maize, using the transformation and tissue culture methods taught by Gordon-Kamm et al; given the suggestion to do so by Maliga et al. Choice of additional flanking genes or the inclusion of a chloroplast origin of replication would have been the optimization of process parameters, absent any evidence to the contrary.

No claim is allowed.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David T. Fox whose telephone number is (703) 308-0280. The examiner can normally be reached on Monday through Friday from 9:30AM to 6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynette Smith, can be reached on (703) 308-3909. The fax phone number for this Group is (703) 308-4242.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 308-0196.

April 7, 2000

DAVID T. FOX
PRIMARY EXAMINER
GROUP ~~180~~ 1638

David T. Fox
Acting SPE